

## CLAIMS

What is claimed is:

1. In an integrated business system having at least one Enterprise Resource Planning  
5 (ERP) database, at least one Customer Relationship Management (CRM) database, and a web server, a method for presenting and editing business data derived from said ERP and CRM databases, comprising:
  - at a user computer, receiving a web page from said web server and displaying a rendering thereof to a user in a browser window, said web page rendering comprising a  
10 plurality of simultaneously displayed portlet windows, each portlet window occupying a relatively small area within said browser window, said portlet windows being selected and arranged according to a user profile for that user, said plurality of portlets comprising:
    - a first portlet displaying a first list of records each comprising a plurality of data elements derived from said  
15 ERP module; and
    - a second portlet displaying a second list of records each comprising a plurality of data elements derived from said CRM module;
  - receiving a single-click from the user to establish a selection of a first one of said  
20 data elements from one of said first or second portlets;
  - responsive to said single-click and without requiring intervening user input, placing said first selected data element in an EDIT state and visually highlighting said first selected data element for editing;
  - receiving editing commands from the user modifying an initial value of said first  
25 selected data element, said editing commands ending with a first terminating input comprising one of (i) a first click-off comprising a click within said browser window outside said first selected data element, or (ii) a first keyboard data element commit command; and
  - responsive to said first terminating input, displaying the modified value of said first  
30 selected data element and transferring said modified value to the web server, without

requiring a page refresh of the browser, for association with said first selected data element in said ERP or CRM database.

2. The method of claim 1, further comprising, if said terminating input comprises said  
5 first click-off, and if said first click-off is at a display position corresponding to a second data element different than said first selected data element, performing the steps of:

responsive to said first click-off and without requiring intervening user input,  
selecting said second data element, placing said second selected data element in the EDIT  
state, and visually highlighting said second selected data element for editing;

- 10 receiving editing commands from the user modifying an initial value of said second selected data element, said editing commands ending with a second terminating input comprising one of (i) a second click-off comprising a click within said browser window and outside said second selected data element, and (ii) a second keyboard data element commit command; and

- 15 responsive to said second terminating input, displaying the modified value of said second selected data element and transferring said modified value to the web server, without requiring a page refresh of the browser, for association with said second selected data element in said ERP or CRM database.

- 20 3. The method of claim 2, further comprising:

maintaining said initial value of said first selected data element in a memory of said user computer associated with said browser;

maintaining said initial value of said second selected data element in said memory;

- 25 receiving a subsequent user selection of one of said first or second selected data elements;

receiving a go-back command from the user; and

- responsive to said go-back command, retrieving the initial value corresponding to said subsequently selected first or second data element from said memory, displaying said initial value, and transferring said initial value to the web server, without requiring a page  
30 refresh of the browser, for storage in association with said first or second selected data element.

4. The method of claim 2, further comprising:  
maintaining said initial value of said first selected data element in a memory of said user computer associated with said browser;
- 5 maintaining said initial value of said second selected data element in said memory;  
subsequent to said second terminating input, receiving a plurality of user inputs in said browser unrelated to said first or second selected data elements;  
receiving a subsequent user selection of one of said first or second selected data elements;
- 10 receiving a go-back command from the user;  
if said plurality of unrelated user inputs resulted in a page refresh prior to said go-back command, keeping said subsequently selected first or second data element at its modified value;  
if said plurality of unrelated user inputs did not result in a page refresh prior to said
- 15 go-back command, retrieving said initial value of said subsequently selected first or second data element from said memory, displaying said initial value, and transferring said initial value to the web server, without requiring a page refresh of the browser, for storage in association with said first or second selected data element.
- 20 5. The method of claim 2, further comprising, if said first or second terminating input comprises said first or second keyboard data element commit command, respectively, performing the steps of:  
responsive to said first or second keyboard data element commit command,  
respectively, and without requiring any intervening user input:
- 25 selecting a third selected data element adjacent to said first or second selected data element, respectively,  
according to a predetermined inherent direction of said first or second keyboard data element commit command,  
respectively; and

placing said third selected data element in the EDIT state and visually highlighting said third selected data element for editing;

receiving editing commands from the user modifying a value of said third selected  
5 data element, said editing commands ending with a third terminating input comprising one of (i) a third click-off comprising a click within said browser window and outside said third selected data element, and (ii) a third keyboard data element commit command; and responsive to said third terminating input, displaying the modified value of said third selected data element and transferring said modified value to the web server, without  
10 requiring a page refresh of the browser, for storage in association with said third selected data element.

6. The method of claim 5, wherein said first, second, and third keyboard data element commit commands are selected from the group consisting of: a TAB command having a  
15 predetermined inherent direction of RIGHT; a SHIFT-TAB command having a predetermined inherent direction of LEFT; an UP ARROW command having a predetermined inherent direction of UP; a DOWN ARROW command having a predetermined inherent direction of DOWN; and an ENTER command having a predetermined direction of DOWN.

20

7. The method of claim 1, wherein said user computer comprises a mouse, and wherein said clicks are mouse clicks.

8. The method of claim 1, wherein said user computer comprises a touch-screen  
25 display, and wherein said clicks are touch-screen taps.

9. The method of claim 1, further comprising performing client-side validation of said  
30 modified value of said first selected data element prior to said transferring said modified value to the web server.

10. The method of claim 1, wherein said browser comprises Microsoft Internet Explorer Version 5.5 or later.

✓

- 5 11. In an integrated business system having a web server and at least one database, a method for presenting and editing business data derived from the database, comprising:
- at a user computer, receiving a web page from said web server and displaying a rendering thereof to a user in a browser window, said web page rendering including a listing of a plurality of records derived from the database, each record comprising a
- 10 plurality of cells;
- receiving a single-click from the user to establish a selection of a first cell in said listing;
- responsive to said single-click and without requiring intervening user input, placing said first cell in an EDIT state and visually highlighting said first cell for editing;
- 15 receiving editing commands from the user modifying an initial value of said first cell, said editing commands ending with a first terminating input comprising one of (i) a first click-off comprising a click within said browser window outside said first cell, or (ii) a first cell-committing keyboard input; and
- responsive to said first terminating input, displaying the modified value of said first
- 20 cell and transferring said modified value to the web server, without requiring a page refresh of the browser, for association with said first cell in the database.

12. The method of claim 11, further comprising, if said terminating input comprises said first click-off, and if said first click-off is at a display position corresponding to a
- 25 second cell in said listing different than said first cell, performing the steps of:
- responsive to said first click-off and without requiring intervening user input, selecting said second cell, placing said second cell in the EDIT state, and visually highlighting said second cell for editing;
- receiving editing commands from the user modifying an initial value of said second
- 30 cell, said editing commands ending with a second terminating input comprising one of (i) a

second click-off comprising a click within said browser window and outside said second cell, and (ii) a second cell-committing keyboard input; and

responsive to said second terminating input, displaying the modified value of said second cell and transferring said modified value to the web server, without requiring a  
5 page refresh of the browser, for association with said second cell in said database.

13. The method of claim 12, further comprising:

maintaining said initial value of said first cell in a memory of said user computer associated with said browser;

10 maintaining said initial value of said second cell in said memory;

receiving a subsequent user selection of one of said first or second cells;

receiving a go-back command from the user; and

responsive to said go-back command, retrieving the initial value corresponding to said subsequently selected first or second cell from said memory, displaying said initial  
15 value, and transferring said initial value to the web server, without requiring a page refresh of the browser, for storage in association with said subsequently selected first or second cell.

14. The method of claim 12, further comprising:

20 maintaining said initial value of said first cell in a memory of said user computer associated with said browser;

maintaining said initial value of said second cell in said memory;

subsequent to said second terminating input, receiving a plurality of user inputs in said browser unrelated to said first or second selected cells;

25 receiving a subsequent user selection of one of said first or second cells;

receiving a go-back command from the user;

if said plurality of unrelated user inputs resulted in a page refresh prior to said go-back command, keeping said subsequently selected first or second cell at its modified  
value;

30 if said plurality of unrelated user inputs did not result in a page refresh prior to said go-back command, retrieving said initial value of said subsequently selected first or second

cell from said memory, displaying said initial value, and transferring said initial value to the web server, without requiring a page refresh of the browser, for storage in association with said subsequently selected first or second cell.

5 15. The method of claim 12, further comprising, if said first or second terminating input comprises said first or second cell-committing keyboard input, respectively, performing the steps of:

responsive to said first or second cell-committing keyboard input, respectively, and without requiring any intervening user input:

10 selecting a third selected cell adjacent to said first or second cell, respectively, according to a predetermined inherent direction of said first or second cell-committing keyboard input, respectively; and

15 placing said third cell in the EDIT state and visually highlighting said third cell for editing;

receiving editing commands from the user modifying a value of said third cell, said editing commands ending with a third terminating input comprising one of (i) a third click-off comprising a click within said browser window and outside said third cell, and (ii) a third cell-committing keyboard input; and

20 responsive to said third terminating input, displaying the modified value of said third selected data element and transferring said modified value to the web server, without requiring a page refresh of the browser, for storage in association with said third cell.

16. The method of claim 15, wherein said first, second, and third cell-committing  
25 keyboard inputs are selected from the group consisting of: a TAB command having a predetermined inherent direction of RIGHT; a SHIFT-TAB command having a predetermined inherent direction of LEFT; an UP ARROW command having a predetermined inherent direction of UP; a DOWN ARROW command having a predetermined inherent direction of DOWN; and an ENTER command having a  
30 predetermined direction of DOWN.

17. The method of claim 11, wherein said user computer comprises a mouse, and wherein said clicks are mouse clicks.

18. The method of claim 11, wherein said user computer comprises a touch-screen  
5 display, and wherein said clicks are touch-screen taps.

19. The method of claim 11, further comprising performing client-side validation of said modified value of said first cell prior to said transferring said modified value to the web server.

10

20. The method of claim 11, wherein said browser comprises Microsoft Internet Explorer Version 5.5 or later.

3

21. In an integrated business system having a web server and at least one database, a  
15 method for presenting and editing business data derived from the database, comprising:  
at a user computer, receiving a web page from said web server and displaying a rendering thereof to a user in a browser window, said web page rendering including a table having data cells arranged in rows and columns, each row of data cells corresponding to a common record derived from said database, each column of data cells corresponding to a  
20 common data element type stored in said database for said records;

receiving at a first data cell in said table a single-click from a user to establish a selection of said first data cell;

responsive to said single-click and without requiring intervening user input, placing said first cell in an EDIT state and visually highlighting said first cell for editing;

25 receiving at a second data cell in said table a bulk selection input from the user, said second data cell being in the same column of said table as said first data cell;

responsive to said bulk selection input, visually highlighting a first data cell group for bulk editing, said first cell group comprising said second cell and any data cells in said table positioned between said first data cell and said second data cell;

30 receiving editing commands from the user setting a value of said first data cell to a first value, said editing commands ending with a first terminating input comprising one of



- (i) a first click-off comprising a click within said browser window outside said first cell, or
- (ii) a first cell-committing keyboard input; and

responsive to said first terminating input, setting a value of each data cell in said first data cell group to said first value and transferring said first value to the web server,

- 5 without requiring a page refresh of the browser, for association with each data cell in said first data cell group in the database.

22. The method of claim 21, wherein said bulk selection input comprises a simultaneous combination of a keyboard SHIFT and a single-click.

10

23. The method of claim 21, each data cell in said first data cell group comprising an initial value prior to said receiving editing commands, further comprising:

maintaining the initial value of each data cell in said first data cell group in a memory of said user computer associated with said browser;

- 15 receiving a subsequent user selection of any of said first data cell or said first data cell group;

receiving a go-back command from the user; and

responsive to said go-back command, retrieving the initial value corresponding to said subsequently selected data cell, resetting the value of said subsequently selected data cell to said initial value, and transferring said initial value to the web server, without  
20 requiring a page refresh of the browser, for storage in association with said subsequently selected data cell.

24. The method of claim 21, each data cell in said first data cell group comprising an  
25 initial value prior to said receiving editing commands, further comprising:

maintaining the initial value of each data cell in said first data cell group in a memory of said user computer associated with said browser;

subsequent to said first terminating input, receiving a plurality of user inputs in said browser unrelated to said first data cell or said first data cell group;

- 30 receiving a subsequent user selection of any of said first data cell or said first data cell group;

receiving a go-back command from the user; and

if said plurality of unrelated user inputs resulted in a page refresh prior to said go-back command, keeping said subsequently selected data cell at said first value;

if said plurality of unrelated user inputs did not result in a page refresh prior to said

5 go-back command, retrieving the initial value corresponding to said subsequently selected data cell, resetting the value of said subsequently selected data cell to said initial value, and transferring said initial value to the web server, without requiring a page refresh of the browser, for storage in association with said subsequently selected data cell.

10 25. In an integrated business system having a web server and at least one database, a method for presenting and editing business data derived from the database, comprising:

at a user computer, receiving a web page from said web server and displaying a rendering thereof to a user in a browser window, said web page rendering including a table having data cells arranged in rows and columns, each row of data cells corresponding to a

15 common record derived from said database, each column of data cells corresponding to a common data element type stored in said database for said records;

receiving at a first data cell in said table a single-click from a user to establish a selection of said first data cell;

responsive to said single-click and without requiring intervening user input, placing

20 said first cell in an EDIT state and visually highlighting said first cell for editing;

receiving at a each of a plurality of other selected data cells in said table a bulk group addition input from the user, said subsequently selected data cells being in the same column of said table as said first data cell, and visually highlighting each of said plurality of other selected data cells as said bulk group addition input is received, said first data cell

25 and said other selected data cells forming a first data cell group for bulk editing;

receiving editing commands from the user setting a value of said first data cell to a first value, said editing commands ending with a first terminating input comprising one of

(i) a first click-off comprising a click within said browser window outside said first cell, or

(ii) a first cell-committing keyboard input; and

30 responsive to said first terminating input, setting a value of each data cell in said first data cell group to said first value and transferring said first value to the web server,

without requiring a page refresh of the browser, for association with each data cell in said first data cell group in the database.

26. The method of claim 25, wherein said bulk group addition input comprises a  
5 simultaneous combination of a keyboard CNTL and a single-click.

27. The method of claim 25, each data cell in said first data cell group comprising an initial value prior to said receiving editing commands, further comprising:  
maintaining the initial value of each data cell in said first data cell group in a  
10 memory of said user computer associated with said browser;  
receiving a subsequent user selection of any of said first data cell or said first data cell group;  
receiving a go-back command from the user; and  
responsive to said go-back command, retrieving the initial value corresponding to  
15 said subsequently selected data cell, resetting the value of said subsequently selected data cell to said initial value, and transferring said initial value to the web server, without requiring a page refresh of the browser, for storage in association with said subsequently selected data cell.

20 28. The method of claim 25, each data cell in said first data cell group comprising an initial value prior to said receiving editing commands, further comprising:  
maintaining the initial value of each data cell in said first data cell group in a memory of said user computer associated with said browser;  
subsequent to said first terminating input, receiving a plurality of user inputs in said  
25 browser unrelated to said first data cell or said first data cell group;  
receiving a subsequent user selection of any of said first data cell or said first data cell group;  
receiving a go-back command from the user; and  
if said plurality of unrelated user inputs resulted in a page refresh prior to said go-  
30 back command, keeping said subsequently selected data cell at said first value;

if said plurality of unrelated user inputs did not result in a page refresh prior to said go-back command, retrieving the initial value corresponding to said subsequently selected data cell, resetting the value of said subsequently selected data cell to said initial value, and transferring said initial value to the web server, without requiring a page refresh of the  
5 browser, for storage in association with said subsequently selected data cell.

29. In an integrated business system having a web server and at least one database, a method for presenting and editing business data derived from the database, comprising:  
at a user computer, receiving a web page from said web server and displaying a  
10 rendering thereof to a user in a first browser window, said web page rendering including a row-wise listing of a plurality of records derived from the database, said web page rendering further comprising a sub-record access icon corresponding to each of said records and positioned adjacently thereto;  
receiving a user rollover in said first browser window of one of said sub-record  
15 access icons;  
displaying a rollover menu near said rolled-over sub-record access icon, said rollover menu comprising a plurality of sub-record identifiers associated with the record corresponding to said rolled-over sub-record access icon;  
receiving a user selection of one of said sub-record identifiers; and  
20 responsive to said user selection, and without refreshing said first browser window, performing the steps of:  
spawning a second browser window on said user computer distinct from said first browser window;  
receiving in said second browser window user inputs  
25 establishing or modifying a sub-record associated with said selected sub-record identifier in said database;  
transferring said established or modified sub-record information from said user computer to the web server; and  
closing said second browser window;  
30 whereby sub-records associated with a record listed in said first browser window are established or modified without refreshing said first browser window, thereby

maintaining continuity of record list presentation while also allowing substantive database changes associated therewith.